



## **Distribution Code Review Panel**

# **Product Approval Procedure**

**Version 1.3  
2017**

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**List of Abbreviation**

<u>Abbreviation</u>	<u>Meaning</u>
AAA	All Aluminum Alloy
AC	Alternating Current
ACSR	Aluminum Conductor Steel Reinforced
AER	Authority for Electricity Regulation
ANSI	American National Standards Institute
DC	Direct Current
DCRP	Distribution Code Review Panel
DIN	Deutsches Institut für Normung e.V. (In English, German Institute for Standardization)
GCC	Gulf Co-operation Council
HRC	High Rupturing Capacity
HT	High Tension
HV	High Voltage
IEC	International Electro technical Commission
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Standards Organization
LT	Low Tension
KV	Kilo Volt
KVA	Kilo Volt Ampere
MR	Minimum Requirement
OES	Oman Electrical Standards
OHL	Over Head Line
PAWG	Product Approval Working Group
Products	Electrical Products under 132KV
PG Clamp	Parallel Groove Clamp
PSRT	Product Specific Requirement Table
RMU	Ring Main Unit
SF6	Sulphur Hexafluoride
XLPE	Cross Linked Polyethylene

## **Introduction**

Distribution Code Review Panel (DCRP), welcome all suppliers, agents & manufacturers to submit prequalification documents for product approval with the DCRP. Our aim is to diversify products at distribution networks & to bring in the latest technology to the distribution network in Oman. Our customers have to assist us choosing the best quality products & work to be the first reviewers in quality adoption. We consider our customers/clients as our partners. Hence, we always seek their technical advice & support to meet our objectives.

Our procedural framework depends upon distribution code regulations & Oman electrical specifications. The following steps guide Applicants how to register their products with DCRP.

## **Procedural Framework**

### **Clause- 1 Requirements and Submission methods;**

Requesters have to review Approved Product List & assure product within the list & confirm products classes which classified into three categories, namely Class A, B & C - elaborated at Product Classes Table (PCT) as per Annexure A. Then obtain the application file from DCRP office after paying submission fees as mentioned at clause-2 of this procedure.

The application file has a guideline named as minimum requirements which explain all requirements & has to be complied with all documents submissions. Application file will be reviewed for submission completeness by Product Approval (PA) engineer with supplier representatives. If any document is missing application file will not be accepted.

In addition following documents shall be enclosed;

1. A Covering letter from the local representative, requesting for approval. This shall be addressed to the Chairman of the Distribution Code Review Panel.
2. File shall have index and a paginating sequence matching guidelines of minimum requirements to facilitate in searching for any required information.
3. Deviation to any requirements of minimum requirements shall be presented at the beginning of the first chapter.
4. Undertaking letters of design persistency & factory location should be enclosed as minimum requirements has described.
5. Soft Copy in (USB or CD) of the file as it is categorized in the hard copy file

**Clause- 2 Fees:**

All fees shall be paid at DCRP account through bank & they are non-refundable at any case including product rejection.

**a. Application forms:**

- Class A product OMR 15 (Rial Omani Fifteen only).
- Class B product OMR 10 (Rial Omani Ten only).
- Class C product OMR 5 (Rial Omani Five only).

**b. Product New and Re-new Registration fees:**

- Class A product OMR 2500 (Two thousand five hundred only)
- Class B product OMR 2000 (Two thousand only).
- Class C product OMR 1500 (One thousand five hundred only).

**c. Factory Inspection visit:**

Supplier/Agent/Manufacturer shall cover the following expenses:

- OMR 1000 be paid before travel
- Travel expenses of two engineers per product including:
  - air ticket on business class,
  - Accommodation with all comfortable facilities.
- Medical insurance.
- Issuing Visa and associated expenses.
- Arranging for delegate receiving at airport & to cover all transportation requirements.
- This condition falls under mandatory type witness

### **Clause-3 Evaluation stages:**

Product evaluation undergoes five major stages, four of them been indicated at guideline of minimum requirements. The progress of evaluation will depend mainly upon the supplier/agent/manufacturers. In so far as the DCRP is confident that the presented product is in line with the requirement of the OES standard and the relevant specifications and under the condition that the supplier/agent/manufacturers has presented documents as per this procedure guideline, then evaluation would not encounter delay.

The evaluation stages are as the following:

#### **Stage-1: Technical requirements review**

All Products shall comply with general Oman Electrical Specifications OES-11 and specifically each product to its associated specification. Annexure B will assist supplier for choosing the required specification. Specifications all are available as free downloads at Authority of Electricity Regulation (AER) website under the sub-heading (Public Register) [www.aer-oman.org](http://www.aer-oman.org).

Suppliers, agents & manufacturers shall review the specifications carefully before applying for product approval. In the absence of the specifications in the website, the latest IEC standards shall apply and these shall be applied in conjunction with the OES-11 specification. In case of requirement differ between OES-11 and the IEC standards, the most stringent one shall prevail.

At this stage manufacturers has to comply with technical requirements & fill in the technical checklist of product to proof it complied with OES. Product compliance to International standards like IEC, European, and DIN, IEEE and BSI technical requirements compliance if been demonstrated will add an important value to the technical stage.

Checklists of the products are available at DCRP website <http://www.dcrp-oman.com/notifications.html> . Suppliers shall to download PDF editable format and shall fill in the offered features at the submission column. Manufacturers may not comply with few clauses, due to new technological innovations which have not been covered by our checklists yet. Hence, any superior standards & specifications could be accepted, especially if they have been adopted internationally. For the total deviations a list should be prepared and submitted at the beginning of this chapter as per guideline of minimum requirements. The schedule of deviations attached in Annexure C shall be filled up.

For products, which do not have checklists, the manufacturers/suppliers are expected to build up a checklist after referring to the general specifications & IEC standards. The newly prepared list shall contain a high level of standards at its checking criteria.

Technical Checklists shall be duly signed & stamped manufacturer. Consequently, checklist will be considered as a technical agreement.

Guaranteed technical Particulars (GTP) is a mandatory requirement which should be filled & comply with the standards.

### **Stage-2: Testing & certification review**

Applicants must submit all type tests, special tests, routine test certificates & reports from an internationally acclaimed independent third party Laboratory which is ISO/IEC 17025 certified. The laboratory shall be certified in all operating standards. Test procedure / protocol / methodology shall be illustrated with schematic diagrams showing connectivity of equipment under test. The tests shall comply with OES testing requirements, IEC tests procedure & requirements as a minimum. Partial testing shall not be acceptable. All type test report shall clearly state the laboratory is responsible about the type test results.

Undertaking letter shall be attached for test certificates/reports passing 5 years confirming no design change or modification. In case any change in the standard or design the manufacture/supplier shall repeat the effected type tests.



All type tests submitted shall be done under the same manufacturer, for the same model/type and for product of the same country of origin. In case manufacturer has not conducted type tests on the same specifications/model/ratings as per OES, then DCRP would encourage conducting those type tests under DCRP officials witness supervision.

### **Stage-3: Drawing & manufacturer undertake review**

General assembly of product, Parts drawings & Typical Connection arrangements shall be submitted. Drawings shall be very clear & self-explanatory. Legend & symbols explanation must be provided. For clarity purpose, all drawings from the manufacturer shall be presented with color prints at A3 paper size.

Manufacturer undertakes letters has to be enclosed as per guide line of minimum requirement. DCRP insist to submit product/equipment sub-supplier/raw materials origin & type/models details in annexure D.

Product/equipment sub-supplier/raw materials should have below details;

- a. Main part description.
- b. Brand name (sub-supplier/factory).
- c. Model/type/trade name
- d. Country of origin.
- e. Projects drawings are not accepted

In addition DCRP needs to discover technical strengths of the submitted product to differentiate it with other products in term of design and features. Therefore salient features of product shall be filled & submitted as shown in Annexure E.

### **Stage-4: Product supply reference & performance review:**

Products shall be subjected to installation at Oman or GCC for a period of time. Evaluator has the right to request for a free of cost sample installation requirement & to inform supplier for sample

submission by giving details of location to be installed in. This stage will start from date of sample receiving. Suppliers shall coordinate with evaluators for sample installation and type of samples been installed. Sample should be monitored by supplier & evaluator. Consequently, a performance report shall be made concerning the sample, which has been installed in the relevant system. Performance report of the product shall be declared by the distribution company by not less than Technical Manger position.

The supplier shall install the sample under the following conditions:

- To choose the worst environment of operation condition for the product to be installed for test & that depend on product.
  - ➔ Terminations, for instance, to be installed at the most dry areas.
  - ➔ OHL hardware at most humid areas.
  - ➔ Transformers & cables at the load centers.
  - ➔ The condition decided by PAWG
- To witness the installation by PAWG member or evaluator with presence & guidance of supplier / agent / manufacturer.
- To update sample performance information after a period of time depending on sample technical characteristic & nature.

If the sample shown a good performance after a full summer at least without any failure or complaint then evaluator has to raise report to PAWG on the sample performance as up-to-date of report signing. Any failure to follow the above conditions is not acceptable by PAWG. The evaluator has the right to extend the period in case the performance of the product is not clear.

Supplier/agent/manufacturer experience & list of clients in Oman, GCC, Middle East & Other countries with total number of Units installed on each country & year of supply has to be presented. Product usage experience & performance shall be submitted along with all evidences of supply record, performance certifications/reports, approval letters & purchase orders. That information's are very important to assure product is reputed & has a good history.

Product Specific Requirement Table (PSRT) may assist to classify minimum information & experience period required for each product to be eligible for use at Oman as shown in Annexure-F.

In addition Manufacturer's Profile & Experience as below bullet points need to be presented:

- Manufacturer shall present a brief introduction, organization chart & list of products.
- Standard Catalogues & Technical specifications of products must be submitted. Only color prints/photographs of such products shall be presented.
- Quality management plan including quality assurance, inspection & testing plans.
- Product identification method & how to differentiate between product and other copied.
- ISO 9001, OSHAS 18001, ISO 14001 & other certifications documents.
- The supplier/agent shall submit a profile & present their capabilities in representing the above manufacturer & submit a procedure in following up the product performance. Technical representative full contact details should be filled at application first page.
- Supplier / agent commercial registration documentations with Agency agreement shall be submitted.
- Local agent shall submit agency certificate from Ministry of Commercial in Oman.
- The local agent shall ensure that all the above points are complied with. Subsequently, the same shall be reviewed by a technically competent authority of the local agent and shall sign at guideline for minimum requirements & put his/her contact details.
- The agent representing the manufacture shall has the legal authority to represent the manufacture.
- Manufacture/ Agent shall provide technical support at site

**Stage-5: Inspection, Final PAWG review & Approval.**

This stage fall under three parts;

**Part-1 Analysis report preparation & PAWG comments collection**

- Evaluator should prepare the analysis form & present product to PAWG with following attachments;
  - 1- Major parts/materials Sub-suppliers List.
  - 2- Kit Contents List for Terminations & Joints (only).
  - 3- Salient features for the product.
  - 4- Technical Checklist copy.
  - 5- Technical Guaranteed Particulars.
  - 6- General arrangements drawings.
  - 7- Factory ISO 9001, OSHAS 18001 and ISO 14001 certification copies.
  - 8- Type test certificate copy or Type test first two pages copy.
  - 9- Summary Type test
  - 9- Product photos or site installation photos (video if available).
- Evaluator should be presented at PAWG meeting to discuss product evaluation or do update his/her company member on the evaluation result. Results of evaluation & sample performance will be discussed at PAWG meeting & the benefits and merits provide satisfactory results.
- Supplier/agent has to clarify & submit all required details & information's requested by the evaluator.
- Product related to protection such as (Protection Relays, CTs...) shall have feedback from the protection committee

### Part-2 Factory inspection & feedback

Manufacture/ Supplier shall submit an official invitation letter DCRP Chairman Attention to PAWG Secretary (Product Approval Section Head) to prepare for inspection visit to manufacturer site to stand on the following:

- Manufacturing process, automation, machinery & management.
- Quality control system & certifications.
- Safety consideration in the product & in manufacturing process.
- Factory Acceptance Test (Routine test).
- Number of employees participating in production, skills, experience & qualification.
- In-house testing facilities.
- Year of establishment & Working capital.
- List of clients in country & worldwide.

Soft copy of factory inspection report is available at DCRP website: [www.dcrp-oman.com](http://www.dcrp-oman.com)

The visits shall be conducted by Product Approval Engineers (Evaluators), PAWG members. PAWG members have the right to recommend Engineers for their companies based on the following terms:

- 1- Experience not less than 5 years in the electrical
- 2- Experience related to the product / manufacture
- 3- Able to audit manufacture/product based of the product approval factory audit
- 4- The nomination shall be approved by DCRP Chairman

Supplier / agent / manufacturer shall deposit the non-refundable registration fees at DCRP account at Respective Distribution Company heading DCRP as per clause-2 of this procedure. The suppliers shall be advised to submit invitation letters & medical insurance certificate on the name of visiting engineers covering all visit period at the destination country & to work clearing visa formalities including expenses.

Manufacturer has to submit visiting program & undertake to arrange for delegate receiving at airport & to cover all transportation requirements at the destination country.

DCRP shall pay the daily allowance for the deputed engineers.

### Part-3: PAWG final review stage & DCRP approval

PAWG meeting been held at the every quarter before DCRP meeting. All distribution companies been represented at PAWG & after the completion of analysis report preparation and factory inspection visit, the evaluator shall present project to next PAWG meeting.

PAWG will review the final results & would put its recommendation as per voting system adopted. The final decision to the DCRP, which, in turn, would formally convey the same to the manufacturer.

### **Clasue-4 Approval Granting & Suspension**

PAWG recommendation not to be considered as approval or rejection, final decision would be to DCRP considering other governmental policies & legislations towards allowing foreign products enter the Sultanate of Oman market.

The granted approval is applicable on the product with same model & design been approved. A product approval certificate with all product details is going to be issued. The certificate is going to be renewed every 5 years. The certificate renew is going to consider the following points:

- 1- Product Performance in the distribution network.
- 2- Modification in the design
- 3- Update in related standard and specifications
- 4- factory inspection is going to be conducted if required to check the line production
- 5- Registration fees are the same

If it's been discovered that supplier/agent/manufacture is manipulated at design, not met distribution electrical system requirements, not supplied approved model & not considered Oman climatic condition requirements then it will be exposed to direct suspension.

**Suspension procedure is under review & targeted to be published in DCRP meeting 03-2017.**

- Note: For further information & details, suppliers / agents / manufacturers are encouraged to approach DCRP website, [www.dcrp-oman.com](http://www.dcrp-oman.com).
- For OES standards visit Authority of Electricity regulation website, [www.aer-oman.or](http://www.aer-oman.or)

**Annexure A: Products Classes Table**

Category	Product	Class	Checklist availability
<b>CAT-01</b>	<b>AIR BREAK SWITCHES (Isolators)</b>		
<b>SUB-CAT</b>	(A) 11KV TYPE	B	yes
<b>SUB-CAT</b>	(A) 33KV TYPE	B	yes
<b>CAT-02</b>	<b>RING MAIN UNITS</b>		
<b>SUB-CAT</b>	(A) OIL TYPE	B	yes
<b>SUB-CAT</b>	(B) SF6 TYPE	B	
<b>CAT-03</b>	<b>DISTRUBUTION TRANSFORMERS</b>		
<b>SUB-CAT</b>	33/0.433KV & 11/0.433KV, 100, 200 & 315KVA.	B	yes
<b>SUB-CAT</b>	11/0.433KV 500 and 1000KVA	B	yes
<b>CAT-04</b>	<b>DISTRIBUTION FEEDER PILLARS</b>		
<b>SUB-CAT</b>	(A) 800AMPS 6 WAYS & 1600AMPS 8 WAYS	B	yes
<b>SUB-CAT</b>	(B) MINI FEEDER PILLAR-400A (6 WAYS)	C	yes
<b>SUB-CAT</b>	(C) 400 AMPS CUTOFF BOX WITH "J" TYPE FUSE COMPLYING OES-3	C	yes
<b>CAT-05</b>	<b>CONSUMER UNITS &amp; ACCESSORIES</b>		
<b>SUB-CAT</b>	(A) METERING PANELS	C	yes
<b>SUB-CAT</b>	(B) MCCB	C	
<b>SUB-CAT</b>	(C) HOUSE SERVICE COUTOUT	C	yes
<b>SUB-CAT</b>	(D) ELECTROMECHANICAL METERS (SINGLE PHASE & THREE PHASE)	B	yes



<b>SUB-CAT</b>	(E) ELECTRONIC METERS (SINGLE PHASE & THREE PHASE)	B	yes
<b>SUB-CAT</b>	(F) TARIFF METERING PANELS	C	
<b>CAT-06</b>	<b>CABLES</b>		
<b>SUB-CAT</b>	(A) 33KV XLPE CABLES COMPLYING WITH OES-2	A	yes
<b>SUB-CAT</b>	(B) 11KV CABLES (XLPE)-COMPLYING WITH OES-2	A	yes
<b>SUB-CAT</b>	(C) LV CABLES (XLPE) COMPLYING WITH OES-2	B	yes
<b>SUB-CAT</b>	(F) FIBRE OPTIC CABLES	B	
<b>CAT-07</b>	<b>PORCELAIN INSULATORS</b>	<b>C*</b>	
<b>SUB-CAT</b>	(A) DISC INSULATORS - COMPLYING WITH OES-1		yes
<b>SUB-CAT</b>	(B) LINE POST TOP INSULATORS (33KV AND 11KV) COMPLYING WITH OES-1		yes
<b>SUB-CAT</b>	(C) SHACKLE INSULATORS FOR L.T. (COMPLYING WITH OES-3)		yes
<b>SUB-CAT</b>	(D) L.T. STAY INSULATOR SETS		yes
<b>SUB-CAT</b>	(E) 11 KV STAY INSULATOR.		yes
<b>SUB-CAT</b>	(F) 33KV STAY INSULATOR.		yes
<b>SUB-CAT</b>	(G) 33KV FIBER GLASS STAIN INSULATORS		yes
<b>CAT-08</b>	<b>SILICON RUBBER INSULATORS</b>		
<b>SUB-CAT</b>	(A) 11KV & 33KV Tension insulator (long rod type).	C	
<b>SUB-CAT</b>	(B) 11KV & 33KV LINE POST TOP INSULATORS.	C	
<b>CAT-09</b>	<b>CONDUCTORS</b>		

<b>SUB-CAT</b>	(A) ACSR CONDUCTOR COMPLYING WITH OES-1	B	yes
<b>SUB-CAT</b>	(B) XLPE AL.CONDUCTOR COMPLYING WITH OES-3	B	yes
<b>SUB-CAT</b>	(C) ALL ALUMINIUM ALLOY (AAA) CONDUCTOR 180.7 SQ.MM.	B	yes
<b>CAT-10</b>	<b>DROPOUT FUSE SET (11KV) WITH ARCING HORNS COMPLY-ING WITH OES-1 (REVISED)</b>	<b>B</b>	<b>yes</b>
<b>CAT-11</b>	<b>AUTO RECLOSERS</b>		
<b>SUB-CAT</b>	(A) 11KV TYPE	A	yes
<b>SUB-CAT</b>	(A) 33KV TYPE	A	yes
<b>CAT-12</b>	<b>11KV &amp; 33KV LIGHTNING ARRESTORS WITH PORCELAIN INSULATION (GAPLESS TYPE)</b>	<b>B</b>	<b>yes</b>
<b>CAT-13</b>	<b>11KV &amp; 33KV LIGHTNING ARRESTORS WITH POLYMERIC INSULATION</b>	<b>B</b>	
<b>CAT-14</b>	<b>ELECTRICAL POLES</b>		
<b>SUB-CAT</b>	(A) WOODEN POLES-CONFORMING TO OES-1	B	yes
<b>SUB-CAT</b>	(B) CONCRETE POLES	B	
<b>CAT-15</b>	<b>TERMINATIONS &amp; JOINTS (LV, 11KV &amp; 33KV)</b>	<b>B*</b>	
<b>CAT-16</b>	<b>OVERHEAD LINE HARDWARE</b>	<b>C*</b>	
<b>SUB-CAT</b>	(A) ANTI CLIMING DEVICE		
<b>SUB-CAT</b>	(B) 4 BOLT TENSION CLAMP		
<b>SUB-CAT</b>	(C) CROSS ARMS FOR 11KV & 33KV		
<b>SUB-CAT</b>	(D) TIE BRACKETS FOR 11KV & 33KV		
<b>SUB-CAT</b>	(E) CABLE SUPPORT CHANNEL		
<b>SUB-CAT</b>	(F) TRANSFORMER SUPPORT CHANNEL		

<b>SUB-CAT</b>	(G) ADJUSTABLE ARCING HORNS FOR D.O FUSE UNIT		
<b>SUB-CAT</b>	(H) BOLT FOR REEL INSULATORS		
<b>SUB-CAT</b>	(I) PILOT PLATE		
<b>SUB-CAT</b>	(J) GUSSET PLATE		
<b>CAT-17</b>	<b>STAY SET MATERIALS</b>	<b>C*</b>	
<b>SUB-CAT</b>	(A) STAYWIRE - LT		
<b>SUB-CAT</b>	(B) STAYWIRE - HT		
<b>SUB-CAT</b>	(C) POLE TOP MAKE OFF (H.T) & (L.T)		yes
<b>SUB-CAT</b>	(D) GUY GRIP END (H.T) & (L.T)		yes
<b>SUB-CAT</b>	(E) STAY ROD L.T		
<b>SUB-CAT</b>	(F) STAY ROD H.T		
<b>CAT-18</b>	<b>CABLE TILES 11KV &amp; 33KV</b>	<b>C*</b>	
<b>SUB-CAT</b>	(A) POLYETHYLENE CABLE TILES		yes
<b>SUB-CAT</b>	(B) CONCRETE CABLE TILES		
<b>CAT-19</b>	<b>FUSES</b>	<b>C*</b>	
<b>SUB-CAT</b>	(A) J TYPE FUSES FOR DISTRIBUTION FEEDERS & CUTOUT BOX		
<b>SUB-CAT</b>	(B) DIN TYPE FUSES FOR DISTRIBUTION FEEDERS & CUTOUT BOX		
<b>SUB-CAT</b>	(C) FUSE LINKS FOR D.O FUSE SET (11KV&33KV)		
<b>SUB-CAT</b>	(D) HV HRC FUSES FOR AB SWITCHES		
<b>SUB-CAT</b>	(E) RMU FUSES		
<b>SUB-CAT</b>	(F) CAPACITOR BANKS FUSES		
<b>SUB-CAT</b>	(G) HOUSE CUT-OUT FUSE LINKS(100A AND 80A)		
<b>CAT-20</b>	<b>ELECTRICAL SIGNS &amp; ALUMINUM PLATES</b>	<b>C*</b>	

<b>SUB-CAT</b>	(A) DANGER PLATE & SUBSTATION IDENTIFICATION PLATE		
<b>SUB-CAT</b>	(B) NUMBERING PLATES		
<b>CAT-21</b>	<b>CABLE TRAYS &amp; ACCESSORIES.</b>	<b>C</b>	
<b>CAT-22</b>	<b>33/11.5 KV POWER TRANSFORMERS</b>		
<b>SUB-CAT</b>	(A) 1, 3, & 6MVA RATINGS	A*	yes
<b>SUB-CAT</b>	(B) 10MVA RATINGS	A	yes
<b>SUB-CAT</b>	(B) 20MVA RATINGS	A	yes
<b>CAT-23</b>	<b>EARTHING MATERIALS</b>	<b>C*</b>	
<b>SUB-CAT</b>	(A) EARTHING CHAMBER		
<b>SUB-CAT</b>	(B) EARTH ROD & ACCESSORIES		
<b>CAT-24</b>	<b>CONNECTORS</b>	<b>C*</b>	
<b>SUB-CAT</b>	(A) P.G. CLAMPS		
<b>SUB-CAT</b>	(B) COPPER LUGS		
<b>SUB-CAT</b>	(C) BI-METALLIC LUGS		
<b>SUB-CAT</b>	(D) FERRULS		
<b>SUB-CAT</b>	(E) MID SPAN JOINT		
<b>SUB-CAT</b>	(F) WEDGE TYPE CONNECTOR		
<b>CAT-25</b>	<b>SWITCHGEARS</b>		
<b>SUB-CAT</b>	(A) 33KV OUTDOOR CIRCUIT BREAKERS	A	yes
<b>SUB-CAT</b>	(B) 11KV OUTDOOR CIRCUIT BREAKERS	B	yes
<b>SUB-CAT</b>	(C) 33KV INDOOR SWITCHGEAR	A	yes
<b>SUB-CAT</b>	(D) 11KV INDOOR SWITCHGEAR	A	yes
<b>CAT-26</b>	<b>CAPACITOR BANKS</b>		
<b>SUB-CAT</b>	(A) 11KV CAPACITOR BANKS (3MVAR)	A	yes
<b>SUB-CAT</b>	(B) 11KV CAPACITOR BANKS (5 MAVR)	A	yes
<b>SUB-CAT</b>	(C) 33KV CAPACITOR BANKS (20MVAR)	A	yes
<b>CAT-27</b>	<b>PROTECTIVE RELAYS</b>	<b>A</b>	
<b>CAT-28</b>	<b>BATTERY CHARGERS</b>	<b>A</b>	

<b>CAT-29</b>	<b>D.C SYSTEM BATTERIES</b>	<b>B</b>	
<b>CAT-30</b>	<b>O/D 33KV Instrument transformers (C.T &amp; V.T)</b>	<b>A</b>	
<b>CAT-31</b>	<b>O/D LV &amp;11KV Instrument transformers (C.T &amp; V.T)</b>	<b>B</b>	

\* indicate that below subcategory products will be charged all as one application fees payments whether all submitted or only one

### **Annexure B: List of OES product-wise**

<b>Srl</b>	<b>OES details</b>	<b>OES - GOVERNING PRODUCT</b>	<b>REMARKS</b>
1	11KV & 33KV OVERHEAD LINES	1	Assigned to DCRP
2	UNDERGROUND CABLES	2	Assigned to DCRP
3	L.T. OVERHEAD LINES	3	Assigned to DCRP
4	REGULATIONS FOR ELECTRICAL INSULATIONS	4	Assigned to DCRP
5	TRANSFORMERS	5 – 5A – 6 – 36	Assigned to DCRP
6	GENERAL SPECIFICATIONS	11	Assigned to DCRP
	SWITCHGEAR & ASSOCIATED EQUIPMENT	12A – 12B – 13 – 13A – 13B – 14 – 15 – 19 - 34 - 35	Assigned to DCRP UNLESS OES12B Assigned to GCRP
8	L.T. EQUIPMENT & MATERIALS	7 – 21A – 21B – 21C – 22A – 22B – 22C – 23 – 28 - 31	Assigned to DCRP
9	11KV & 33KV MATERIAL & EQUIPMENT	8 – 9 – 10 – 16A – 16B – 17 – 18 – 20 – 25A– 25C – 25D – 26A – 26B – 26C – 26D – 29 - 33	Assigned to DCRP
10	33/11 KV OUTDOOR SUBSTATION	30	Assigned to DCRP
11	33/11 KV INDOOR SUBSTATION	24	Assigned to DCRP



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Signature: \_\_\_\_\_

Designation: \_\_\_\_\_

Name of Manufacturer: \_\_\_\_\_

Company Seal: \_\_\_\_\_

Manufacturer may present multiple sheets, if required so.

**Annexure D: Major parts sub-suppliers list format**

The following tabular format shall be filled up by the manufacturer during the course of the evaluation of the product with the PAWG:







<b>1</b>	Checklist	Required	Required	Required
<b>2-a</b>	Type Test certificate & report	Required	Required	Required
	Type Test witnessing	If requested	If requested	If requested
<b>b</b>	Special tests	Required	Required	Required
	Special tests witnessing	If requested	If requested	If requested
<b>c</b>	Routine Tests Not older than (6) months	Required	Required	Required
	Routine Tests witnessing	Required	Required	Required
<b>3-a</b>	General Assembly Drawings	Required	Required	Required
<b>b</b>	Typical connection arrangements	Required	Required	Required
<b>c</b>	Parts Drawings	Required	Required	Required
<b>4</b>	Products Main Parts List	Required	Required	If applicable
<b>5-a</b>	Experience in GCC	Required for 2 Years if Not a National Product	Required	Required
	Minimum No. of Installed Units	Refer to products classification table		
<b>b</b>	Experience in Middle East	5 Years if Item 7 is not satisfied	Required for 2 Years if Not a National Product	Preferred
	Minimum No. of Installed Units	Refer to products classification table		
<b>c</b>	Experience in Other Places	10 Years if Item 9 is Not Satisfied	5 Years if Item 8 is Not Satisfied	Preferred
	Minimum No. of Installed Units	Refer to products classification table		
<b>6</b>	Certificates form Other Network Operators	3 Nos.	3 Nos.	If requested
<b>7</b>	Factory Site Visit	Required	Required	If requested
<b>8</b>	Other Site Visits	If requested	If requested	If requested
<b>9</b>	Sample Submission	Case-to-Case basis	Required	Required

### **Annexure G: Maximum evaluation progress time frame**

Srl	New progress follow up		Done by	Percentage	Period for class C products	Period for class B products	Period for class A products
1	Technical requirements review stage		evaluator	20%	20 days	30 days	45 days
	Supplier compliance period		Supplier		15 days	20 days	20 days
2	Testing & certification review stage		evaluator	20%	30 days	45 days	60 days
	Supplier compliance period		Supplier		10 days	15 days	20 days
3	Drawing & performance collection stage		evaluator	20%	20 days	30 days	30 days
	Supplier compliance period		Supplier		10 days	15 days	20 days
4	Initial analysis preparation & PAWG comments stage		evaluator	20%	20 days	30 days	30 days
	Supplier compliance period		Supplier		10 days	15 days	20 days
5	Inspection, Final PAWG review & Approval	Report preparation	evaluator	20%	30 day	30 days	30 days
		Inspection visit	evaluator		15 days	15 days	15 days
		PAWG final review & Approval granting by DCRP	PAWG		15 days	15 days	15 days
<b>Total period required for each product class</b>				<b>100%</b>	<b>215 days</b>	<b>260 days</b>	<b>315 days</b>